

94 first layer. A first terminal zone of the second conduction type is configured adjacent the channel zone. A second terminal zone of the first conduction type is formed in the first layer. Compensation zones of the first conduction type are formed in the first layer. A second layer of the second conduction type is configured between the substrate and the compensation zones. --

In the Claims:

Please cancel claims 1-14 and please add the following new claims:

-- 15. A semiconductor component, comprising:

a semiconductor body having a substrate of a first conduction type and a first layer of a second conduction type located above said substrate;

95 a channel zone of said first conduction type formed in said first layer;

a first terminal zone of said second conduction type configured adjacent said channel zone;

a second terminal zone of said first conduction type formed in said first layer;

compensation zones of said first conduction type formed in said first layer; and

a second layer of said second conduction type configured between said substrate and said compensation zones.

16. The semiconductor component according to claim 15, comprising:

a boundary zone of said first conduction type extending vertically in said first layer towards said semiconductor body.

17. The semiconductor component according to claim 16, wherein said boundary zone extends from said channel zone to said substrate.

18. The semiconductor component according to claim 16, wherein said boundary zone is laterally spaced away from said channel zone.

19. The semiconductor component according to claim 18, wherein:

said semiconductor body has a first surface; and

said boundary zone extends from said first surface of said semiconductor body to said substrate.

20. The semiconductor component according to claim 15, wherein said compensation zones have a pillar-shaped design.

21. The semiconductor component according to claim 20, wherein at least some of said compensation zones adjoin said channel zone.

22. The semiconductor component according to claim 15, wherein said compensation zones have a spherical design.

23. The semiconductor component according to claim 15, wherein:

said compensation zones define first compensation zones;

said first layer has second compensation zones of said second conduction type formed therein;

said second compensation zones are adjacent said first compensation zones; and

said second compensation zones are doped more heavily than said second layer.

24. The semiconductor component according to claim 15, wherein said boundary zone is doped more heavily than said substrate.

25. The semiconductor component according to claim 15, wherein:

said second terminal zone has a first section extending vertically to said second layer; and

95 said second layer laterally extends at a level;

said second terminal zone has a second section extending laterally at said level of said second layer.

26. The semiconductor component according to claim 25, wherein said first section and said second section of said second terminal zone form a well-like structure enclosing said first terminal zone and at least some of said compensation zones.

27. The semiconductor component according to claim 15, wherein:

said second terminal zone has a first section extending vertically to said second layer; and

said second terminal zone has a second section extending laterally near said second layer.

28. The semiconductor component according to claim 27, wherein said first section and said second section of said second terminal zone form a well-like structure enclosing said first terminal zone and at least some of said compensation zones.

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29. The semiconductor component according to claim 15, wherein said first layer has a number of dopant atoms of said first conduction type and a number of dopant atoms of said second conduction type that are approximately identical.

30. A semiconductor component, comprising:

a semiconductor body having a substrate of a first conduction type and a first layer of a second conduction type located above said substrate;

as
a second layer of said second conduction type formed between said first layer and said substrate, said second layer being doped more weakly than said first layer; and

a boundary zone of said first conduction type, said boundary zone vertically extending to said substrate and to said second layer. --
